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A New Subspecies of *Celastrina sugitanii* MATSUMURA from Taiwan (Lepidoptera, Lycaenidae)

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Abstract A new subspecies of *Celastrina sugitanii* from Taiwan is named as *shirozui*. The differences between it and its allied subspecies *kyushuensis* SHIRÔZU, 1943 and *lenzeni* FORSTER, 1941 are also discussed.

Up to the present, ten species of the *Lycaenopsis*-group have been found in Taiwan (ELIOT & KAWAZOË, 1983). During a trip from Ronghwa to Chihtuan in N. Taiwan in 1984, I collected some specimens of a *Celastrina* species hitherto unknown from Taiwan. They much resemble *C. sugitanii kyushuensis* SHIRÔZU, 1943 and *C. sugitanii lenzeni* FORSTER, 1941, but there are some differences between them, I consider that they represent a new subspecies of *sugitanii*, and describe them as follows.

Celastrina sugitanii shirozui subsp. nov.

♂. Upperside of forewing: Ground colour purple. A narrow black border at outer margin, almost equal in width throughout except at apex. Some veins covered with white scales, which are especially well developed along anterior margin of discoidal cell near costa, and at basal half of vein 6, vein 7 as well as the veins that follows. Cilia at dorsum longer than those of termen, the former white and the latter composed of long white and short black hairs, and mixed with at additional long black hairs at veins.

Upperside of hindwing: Ground colour as forewing but marginal black streak narrower. White scales covering veins distinct, clearly seen on veins 6 and 7. Long white hairs distributed on hind wing longer and more broadly covering 1/3 of hindwing. Cilia very long, especially at dorsum, same as that of forewing in colour. Sometimes single indistinct black spots appearing at the tip of spaces. Griseous area present along costa.

Underside of forewing: Ground colour chalky. Spots poorly developed, especially those of marginal and submarginal series. Four spots usually present on the middle, two in spaces 2 and 3 arranged in a line and so the other two in spaces 4 and 5. Both lines are nearly parallel. A short greyish streak present at cell end.

Underside of hindwing: Ground colour as on forewing, but somewhat tinged with indigo near the base. Submarginal markings poorly developed, but becoming clearer towards tornal area. Marginal markings well developed, and more distinctive towards tornal area. Spots on the other portion well developed, almost black: usually 4 spots in space 1, one in space 1a, one in space 1b, and two in space 1c which connected with each other into V-shape, and sometimes spot in 1a disappearing. Single spot present

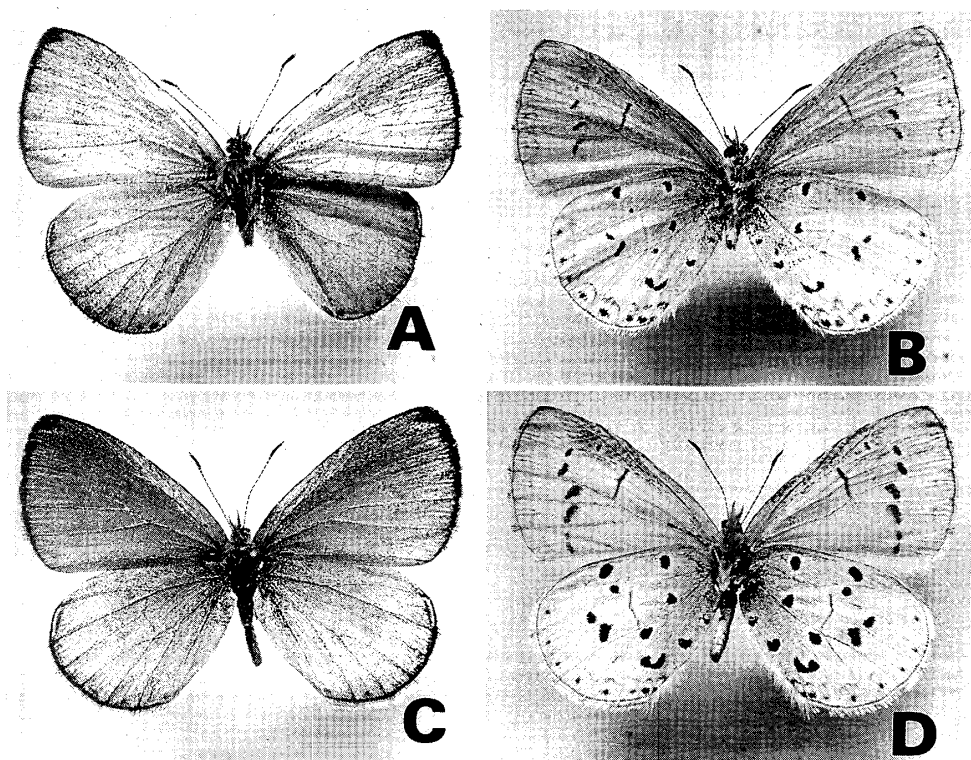


Fig. 1. *Celastrina sugitanii shirozui* subsp. nov. A, B. Holotype, ♂ ; C, D. Paratype (The fair-developed spots type), ♂.

at inner $1/3$ in spaces 4 and 5. A couple of spots also present in space 7, almost dividing the space into 3 parts. A single spot present on middle of posterior part of discoidal cell. A short greyish streak recognizable at cell end.

♀. Unknown.

Androconia : About $2/3$ as wide as long excluding stalk. About 9 – 10 ribs present, and they composed of two portions : One with canal-line placed near basal $1/3 - 1/2$, the other being a series of circles regularly arranged on the supposed lines extending from canal-line to apical margin.

Male genitalia : Ring in lateral view rather curved at anterior margin and rectangle in shape. Vinculum tiny, lacking saccus. Valva broad, distal portion divided into a dorsal and a ventral processes ; the dorsal one very long, slightly curved in the middle, the ventral one very short, about $1/5 - 1/4$ as long as the dorsal one ; distance between them about 2 – 3X as the dorsal process. Y-shaped juxta connected with valvae at the base, somewhat expanding apically. Leiste well developed. Phallus long and thick, club-shaped, ventral portion of its tip formed into a needle-like process. Coecum penis enlarged into bas-shape. Cornuti well developed with complex sclerotized portion and spinules.

A male paratype has the underside markings more developed than in the other specimens as follows : Single black spot present each in space 1b and 1c of forewings and arranged in a line with spots of spaces 2 and 3. Each single additional spot appearing at the base of spaces 2 and 6 of hindwing. All the spots except for marginal and submarginal series are broader.

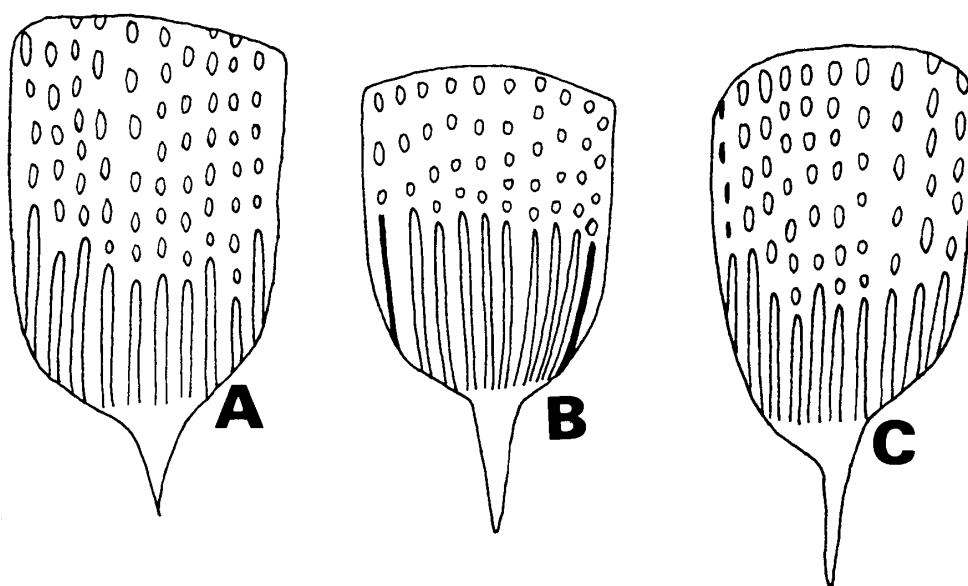


Fig. 2. A — C. Androconia of *Celastrina sugitanii shirozui* subsp. nov.

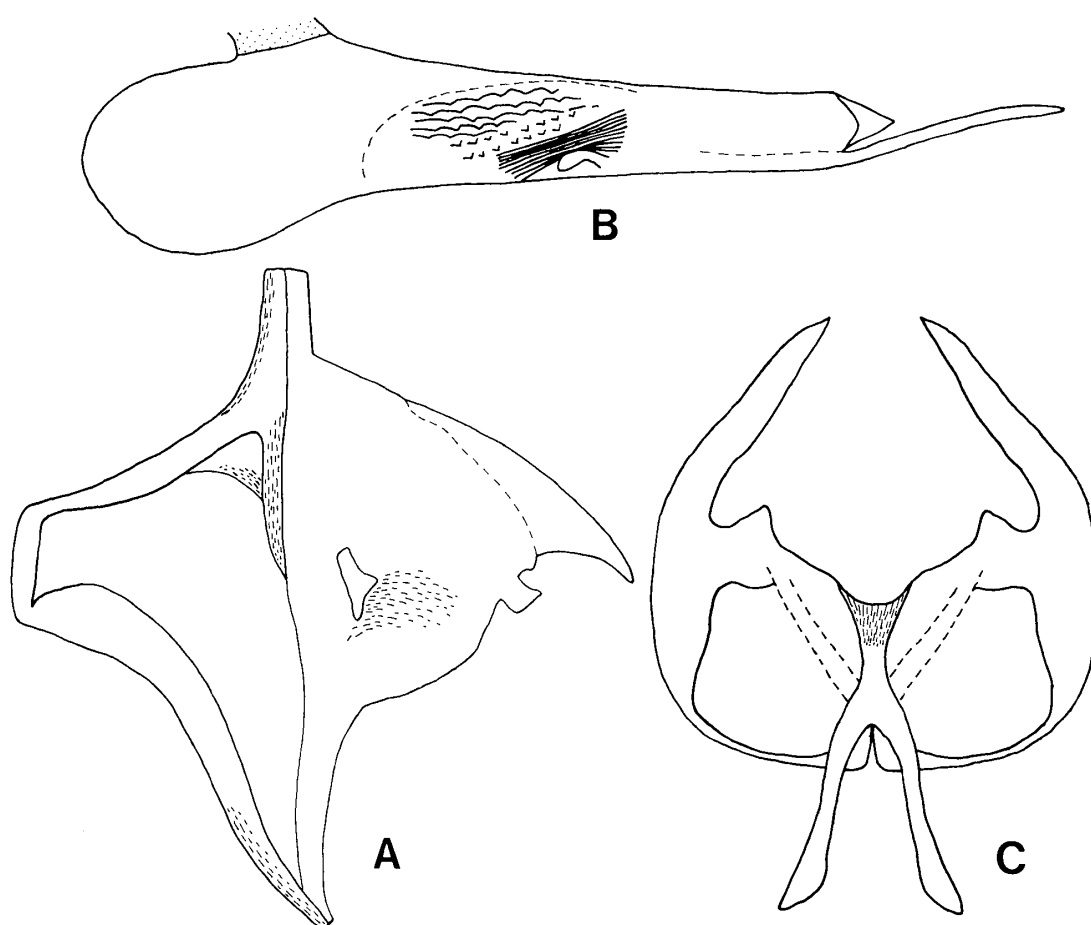


Fig. 3. Male genitalia of *Celastrina sugitanii shirozui* subsp. nov. A. Ring ; B. Phallus ;
C. Valvae and juxta.

Length of forewing: 16.0–16.7 mm.

Holotype ♂, between Palin, Taoyuan and Chihtuan, Ilan. N. Formosa, 24. ii. 1984, Yu-Feng HSU leg.

Paratypes 3♂, same data as holotype.

Holotype and one paratype (fair-developed spots type) will be deposited in the British Museum (Nat. Hist.), other paratypes will be deposited in Insect Specimen Museum, Department of Plant Pathology & Entomology, National Taiwan University.

Distribution: N. Taiwan.

Remarks: This new subspecies is closely related to both *Celastrina sugitanii lenzeni* (FORSTER) and *C. sugitanii kyushuensis* SHIRÔZU, but easily distinguished from *lenzeni* by well developed and dissimilar markings of wings. In the appearance this new subspecies is most closely allied to *kyushuensis*, but differs from it in the following respects.

- 1) The marginal black border on hindwing is narrow in *shirozui* than *kyushuensis*.
- 2) One black spot in space 3 on underside of hindwing is distinctly marked in *kyushuensis*, but almost or entirely disappears in *shirozui*.

This new subspecies is named in honour of Dr. SHIRÔZU who taught me much about the knowledge of Lepidoptera.

Acknowledgements

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摘 要

台湾産スギタニルリシジミの新亜種について (徐 堉峰)

台湾の桃園県巴陵—池端で採集したスギタニルリシジミの新亜種を *Celastrina sugitanii shirozui* と命名し記載した。本亜種は特に *C. sugitanii kyushuensis* に似ているが次の二点で区別できる。

- 1 ♂の後翅表面の外縁の黒条は *kyushuensis* より狭い。
- 2 後翅裏面の第3室は斑紋を欠くが、あらわれてもきわめて不明瞭。 *kyushuensis* では必ず明瞭なる1黒点を有する。